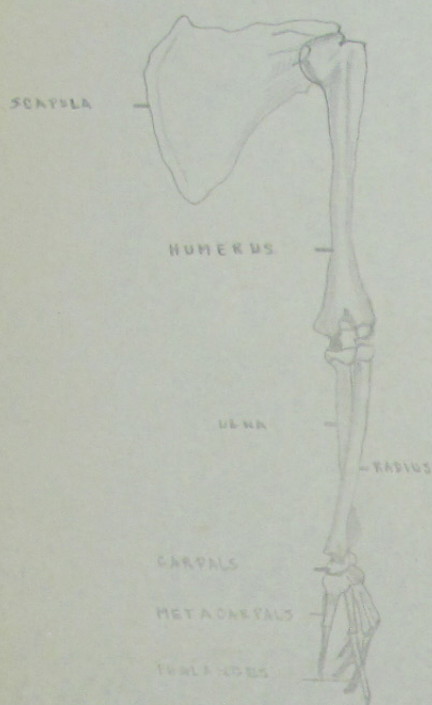
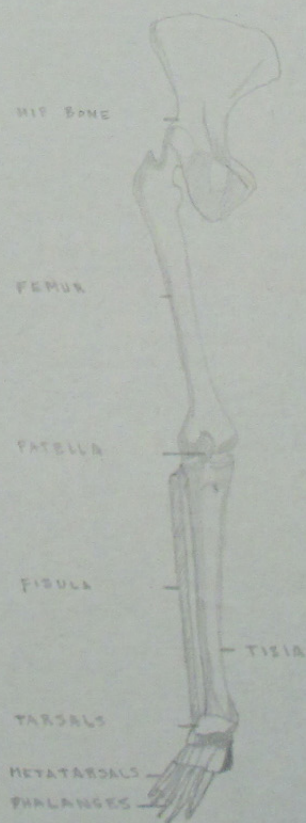


SCAPULA AND LEFT ARM



HIP BONE AND RIGHT LEG



d) Lower extremities

- pelvic - hip bone.
- femur - thigh bone - articulates pelvic bone.
- patella - knee bone
- tibia } bones of the leg.
- fibula }
- tarsals - 7 bones of the ankle.
- metatarsals - 5 " " " foot
- phalanges - 14 " " " toes.

Kinds of bones.

- long bones - femur
- short bones - phalanges
- flat bones - shoulder blades.
- irregular bones - bones of vertebrae.

e) Cranium

- 1 occipital bone - base of skull
- 2 parietal bones - thin bone on top of the head
- 1 frontal bone - forehead

The occipital bone has a peg which fits into the bones of the spine.

f) Bones of the face.

- 2 superior maxillary bones - form upper jaw.
- 2 palatal bones - roof of the mouth.
- 2 nasal bones - bridge of the nose.
- 2 lacrimal bones - tear bones under eyes.
- 2 inferior turbinate bones - nasal cavities.
- 1 vomer bone - separates the inferior turbinate bones.
- 2 male bones - cheek bones
- 1 inferior maxillary bone - lower jaw.

Joints - immovable - skull

movable - a) perfect

- 1) ball + socket - hip + shoulder.
- 2) hinge - elbow and knee
- 3) pivot - neck
- 4) sliding - wrist + ankle.
- b) imperfect - vertebral joints.

Physiology

Man is an animal and differs very little from other animals.

Two main functions

- 1) conversion of food and air into energy and tissue
- 2) reproduction of other individuals of its own species

The body is made up of cells.

An animal cell - is a minute corpuscle of living substance or protoplasm, seldom exceeding 500 of an inch.

These cells have -

- 1) power of movement (can change its shape)
- 2) power of response to excitement
- 3) power of growth
- 4) power of secretion
- 5) power of reproduction

Nucleus divides into two parts, forming a second portal cell, increase into 2, 4, 8, 16.

A female germ cell has a male element fuse in sexual reproduction.

Five tissues of the body

- 1) connective tissue (supporting tissue)
supports
connects
most abundant tissue in the body.
(all bone is connective tissue)
- 2) epithelial tissue (surface limiting tissue)
surface lining inside and out.
everything lined with this tissue.
- 3) muscular tissue (contracting tissue)
- 4) nervous tissue (sensory tissue)
ex. finger-tips, brain.
- 5) blood and lymph.

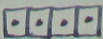



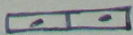
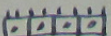
Connective tissue

- 1) white fibrous tissue
 - many, fine + strong, not elastic - but can be stretched to the end of its wave.
 - most ligaments are made of them + when a great many are ranged close together they form a strong band.
- 2) yellow elastic tissue
 - straight, branched + elastic
 - intermingled with white fibrous tissue so they do not become overstretched.
(vocal chords are plain yellow tissue)
- 3) areolar tissue
 - most abundant tissue in the body.
 - loose network of white fibrous tissue + yellow elastic tissue.
- 4) adipose tissue
 - is fat developed from areolar tissue, the protoplasm of the cells being displaced by fat.
 - (ex) mucous of the eye.
- 5) adenoid tissue
 - chiefly in lymphatic glands
 - (ex) the adenoid.

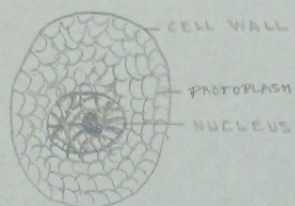
Varieties of connective tissue

fibrous tissue
cartilage or gristle
fibre-cartilage
bone
dentine.

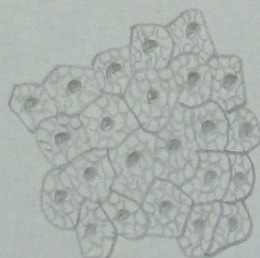
Epithelial tissue - surface limiting.

- 1) simple 
- 2) stratified - skin 
- 3) transitional - bladder 
- 4) columnar - alimentary 
- 5) squamous - blood vessels 
- 6) ciliated - air passage of the nose containing a hair 

A CELL.



A GROUP OF CELLS.



Blood

Carries food to all the tissues.

60% liquid

40% corpuscles.

Liquid - plasma (water, salts, albumen, elements of fibrin)

Corpuscles - red.

- minute circular discs, concave on both sides.
- have a diameter of $\frac{1}{200}$ of an inch.
- form 40% of weight of blood.
- born in red marrow of bone - live 3 weeks and are broken up by the liver.
- O_2 carriers of the body.
- white
- large but fewer than red corpuscles.
- $\frac{1}{1000}$ of an inch (composed of soft jelly-like substance (protoplasm))
- resemble minute animal cell.
- born in bone marrow.

Uses of the blood

- 1) serves as storehouse for nutritious matter absorbed from the blood and conveys this nourishment to all parts of the body.
- 2) conveys the materials from which the secretions are formed to the various glands which prepare them.
- 3) carries oxygen to all the tissues. Oxidation goes on, this being essential for maintenance of high temperature of the body.
- 4) it collects up waste materials and conveys them to the excretory organs for separation and removal.
- 5) it distributes heat throughout the body and it moistens various tissues.

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Temperature of the blood - 99°F. - weighs 10% of weight of the body.

Two kinds of blood

arterial - bright red, rich in oxygen and usually found in arteries.

venous - dark red, usually found in veins.
- contains less oxygen than arterial blood + more carbonic acid gas (used up & sh.)
- converted into arterial blood by the absorption of blood.

Digestive system

Food comes in contact with the teeth first.

An adult has 32 teeth.

A child has 20 teeth (milk teeth)

6 molars

4 bicuspids

4 incisors

2 canines

Dentine is the hardest substance in the body.

Glands - 1) secreting - prepares and separates a fluid from the blood. (salivary glands)

2) excreting - sweat glands - separates waste matters.

Kinds - simple + compound tubular
simple + compound lobulated.

3) ductless - spleen, thyroid, thymus, pituitary (at the base of the brain) suprarenal capsules.

Salivary glands - parotoid - under the ear
submandibular - under the jaw (size of plum)
sublingual - under the tongue (size of almond)

Saliva - made of water, salts, ptyalin (acting principle)
- acts on starches, turning them alkaline.
- rate of secretion 1-2 lbs. daily, continuous when eating.
- moistens mouth + food.
- helps in speech.

Food passes from mouth into the pharynx, then into the oesophagus.

Pharynx - opening from mouth to oesophagus.
- glottis closed by epiglottis + 2 posterior nares + 2 eustachian tubes.

Oesophagus - ^{3" long} tube from mouth to stomach
- 9 inches long.
- grips food and passes it along and down.
- absorption starts immediately.

It has four coats

- 1) outer coat - of connective tissue.
- 2) second coat - is muscular - the muscles running longitudinally + circularly.
- 3) third coat - sub-mucous or areolar tissue
- 4) inner coat - mucous, a soft skin.
(epithelial) has mucous in it.

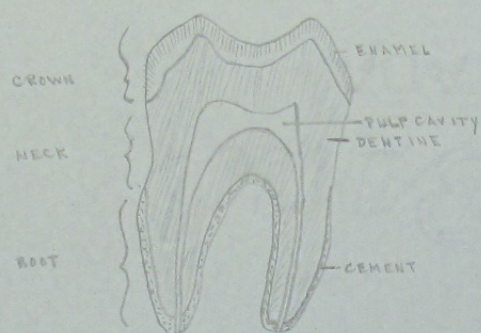
Stomach - a muscular bag about 10 inches in length.
- situated under the diaphragm.
- divided into greater curvature and lesser curvature. pylorus - to intestines
(waves of contraction rolls food)

It has four coats.

- 1) outer coat - of connective tissue called peritoneum.
- 2) muscular - 3 sets of muscles.
circular, longitudinally + obliquely
- 3) areolar tissue.
- 4) mucous (inner coat) - makes gastric juice which is turned into chyme.
(chymification of food)
- the food is turned white + acid
- heat of the stomach dissolves part of the fat.

Pepsin is the active principle in gastric juice.
Stomach holds food for 6 hours.

SECTION OF A TOOTH.





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